

## PATENT SPECIFICATION

(11)

1 340 389

1 340 389

## DRAWINGS ATTACHED

(21) Application No. 15741/71 (22) Filed 19 May 1971  
 (23) Complete Specification filed 19 May 1972  
 (44) Complete Specification published 12 Dec. 1973  
 (51) International Classification B25G 1/10  
 (52) Index at acceptance  
 B4K 3B 7G4X 7X  
 B6P A5C



## (54) HANDLE

(71) I, GEOFFREY FAIRBAIRN, a British Subject, of 24, Chesterton Towers, Chapel Street, Cambridge, do hereby declare the invention, for which I pray that a Patent 5 may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to handles for small 10 tools or instruments likely to require a reasonably high degree of precision in their use such as pens, pencils, glasscutters, engraving tools and the like. Such tools or instruments are conveniently embraced by 15 the term "scribing tools", and this latter expression is used herein to include all tools whose intended purpose is to be used by hand to mark or scribe upon a surface.

In general, scribing tools effectively 20 comprise no more than a stem, by which the tool is held, to which the actual operative part of the tool is attached. This stem, in use, is usually held between the index finger and thumb, and is clamped, in a 'V' formed 25 by these digits, by the middle finger laterally across its back. The necessary movement of the operative part of the tool for scribing is effected by pressure applied thereto by one or more of the digits holding it. 30 However, for work of a delicate or fine nature it is desirable for most people, in order to achieve a satisfactory result, to have a greater measure of control than is possible with such a conventional construction. 35

Accordingly, this invention provides an 40 asymmetrical handle comprising a palm abutting surface, means for mounting a scribing tool as defined hereinbefore in the handle such that the tool extends from the handle in a direction away from the palm-abutting surface, and separate thumb-, index-finger- and middle finger-receiving channels extending from discrete points on 45 the palm-abutting surface, such that the

thumb- and index-finger-receiving channels converge to form a V, and the scribing tool, when mounted in the handle, extends between said V and the middle-finger receiving channel, which handle is adapted, when held by 50 a user with his thumb, index finger and middle finger in the appropriate channels, substantially to fill the space between at least the thumb, index finger and middle finger of the user and his palm.

The handle may be made of any rigid or 55 flexibly resilient material, and the method of shaping it will depend of course on the material chosen. A natural or synthetic resin is generally preferred because it is inexpensive and easy to mould (a process of injection moulding being very appropriate. Other materials which could be used include metals, woods, minerals, rubber and glasses, but these naturally do not exhaust the possibilities.

Because the handle is so shaped as to 60 fit the hand, it proves to be more comfortable to use than a conventional instrument, and it may moreover enable old or debilitated persons, previously either unable to use such an instrument at all or not able to produce a sufficiently good result therewith, now to use one satisfactorily.

Conveniently, the means by which the 65 handle is adapted for the mounting of an instrument therein is in the form of a hole which may be set axially in a spigot extending from the handle. The instrument 70 may make a friction fit with the hole or retaining means for the instrument may be provided in the hole.

The handle may extend between the palm of the hand and the third and little fingers, and this essentially involves the provision 75 of a "tail" on the handle. However, for reasonable freedom of movement, coupled with accuracy of operation, it is preferred that the handle does not extend substantially beyond the middle finger. Advantageously, 80

[Price 25p]

BEST AVAILABLE COPY

at the third finger side of the handle there is provided a surface against which the third finger (the finger adjacent the little finger) of the hand may rest and provide 5 some measure of support during use.

Although the handle may be in one piece, (as is the one shown in the accompanying drawing), it may be convenient to make it in parts later to be assembled together. Most 10 advantageously it may be made in two parts which will be clipped together in some way or bonded together. In addition, it is preferred to so make the parts or part that, when complete, the handle possesses a 15 hollow interior. This gives the advantage of low weight and consequent ease of use.

In a preferred construction, the handle may be made so that it may receive and hold rigidly a conventional instrument such 20 as a rigid refill for a ballpoint pen. To this end the handle may either have two or more holes therein enabling the insertion of the grip, shaft or stem of the conventional instrument thereinto so that it extends 25 beyond the handle at both ends, or alternatively it may merely have the one hole described previously. However, in this latter case it may be necessary to adjust the shape of the handle to incorporate the instrument 30 fully therein.

If the conventional instrument is a ball-point pen refill and it is mounted in an air-tight fashion in the handle, a breather hole should be provided in the handle to 35 allow the ink to flow freely.

A preferred embodiment of this invention will now be described, though by way of illustration only, with reference to the accompanying drawings, in which:

40 Figure 1 is a perspective view of the handle from the front,

Figure 2 is a perspective view of the handle from the rear and below,

Figure 3 is a perspective view of the 45 handle from above, and;

Figure 4 is a perspective view of the handle from the front and below.

In each case the handle has a rigid refill for a ball-point pen mounted therein.

50 The same reference numerals are used throughout to denote the same features on each of the figures.

The handle shown in Figures 1 to 4 has a palm-abutting surface 1, a thumb-receiving 55 channel 2, and two finger-receiving channels 3 and 4 respectively for the index and middle fingers. A ball-point pen refill 5 is shown mounted therein, affixed by a collar 6 in a hole 7 provided in a spigot 8 extending from the handle. At 9 there is provided a finger abutting surface for the third finger

of the hand.

It is readily apparent that, in use, when the fingers and thumb are placed in their appropriate channels, the spigot and the 65 head of the ball-point pen attached thereto will extend outwardly from the palm of the hand. The handle is so constructed as to allow the person to use the instrument with as little variation from the hand position 70 with the conventional instrument as possible.

#### WHAT WE CLAIM IS:—

75

1. An asymmetrical handle comprising a palm-abutting surface, means for mounting a scribing tool as defined hereinbefore in the handle such that the tool extends from the handle in a direction away from the palm-abutting surface, and separate thumb-, index-finger- and middle finger-receiving channels extending from discrete points on the palm-abutting surface, such that the thumb- and index-finger-receiving channels 80 converge to form a V, and the scribing tool, when mounted in the handle, extends between said V and the middle-finger receiving channel, which handle is adapted, when held by a user with his thumb, index-finger 85 and middle finger in the appropriate channels, substantially to fill the space between at least the thumb, index-finger and middle finger of the user and his palm.

2. A handle as claimed in claim 1, in 90 which the means for mounting the scribing tool in the handle is in the form of a hole therein.

3. A handle as claimed in claim 2, in 95 which the hole is set axially in a spigot extending from the handle.

4. A handle as claimed in claim 2 or claim 3, in which retaining means for the instrument are provided in the hole.

5. A handle as claimed in any of the 105 preceding claims, which does not extend substantially beyond the middle finger of the user.

6. A handle as claimed in any of the preceding claims, in which, at the third 110 finger side of the handle, there is provided a surface against which the third finger of the hand may rest during use.

7. A handle as claimed in any of the preceding claims which possesses a hollow 115 interior.

8. A handle as claimed in any of the preceding claims, in which the handle has two or more holes therein enabling the insertion of the grip, shaft or stem of a conventional 120 instrument thereinto.

9. A handle as claimed in any of the

preceding  
thetic res  
10. A  
preceding  
cribed he

ted for  
lished at

BEST AVAILABLE COPY

t that, in use, when  
are placed in their  
the spigot and the 65  
pen attached thereto  
from the palm of the  
constructed as to  
the instrument with  
the hand position 70  
instrument as pos-

10. A handle as claimed in any of the  
preceding claims and substantially as des-  
cribed herein.

For the Applicant:  
SANDERSON & CO.,  
(Chartered Patent Agents),  
97 High Street,  
Colchester, Essex.

ted for Her Majesty's Stationery Office by The Tweeddale Press Ltd., Berwick-upon-Tweed, 1973.  
lished at the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies  
may be obtained.

IS:—

75

handle, comprising  
means for mount-  
defined hereinbefore  
the tool extends from the 80  
on away from the  
id separate thumb-  
le finger-receiving  
discrete points on  
ce, such that the  
receiving channels 85  
d the scribing tool,  
andle, extends be-  
iddle-finger receiv-  
e is adapted, when  
umb, index-finger 90  
appropriate chan-  
the space between  
finger and middle  
s palm.  
ed in claim 1, in 95  
nting the scribing  
e form of a hole

ed in claim 2, in  
ially in a spigot 100

ed in claim 2 or  
g means for the  
the hole.

ed in any of the 105  
does not extend  
middle finger of

ed in any of the  
ch, at the third 110  
here is provided  
e third finger of  
use.

1 in any of the  
ssesses a hollow 115

n any of the pre-  
-handle has two  
ng the insertion  
f a conventional 120

in any of the

BEST AVAILABLE COPY

401/6

1973-12

1973 73

1340389 COMPLETE SPECIFICATION

1 SHEET This drawing is a reproduction of  
the Original on a reduced scale

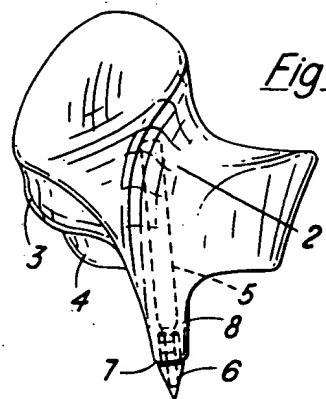


Fig. 1.

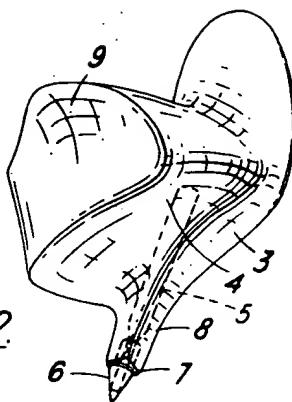


Fig. 2.

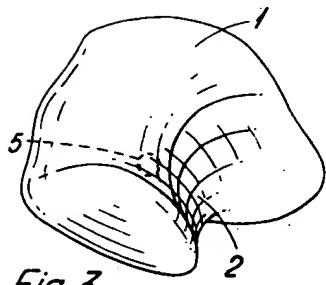


Fig. 3.

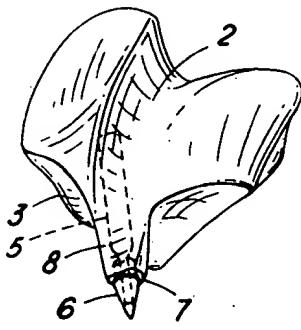


Fig. 4.

BEST AVAILABLE COPY